I Claim

1. A golf swing analyzer comprising a printed circuit board that bears at least two LEDs and a circuit capable of connecting the LEDs to a battery;

the printed circuit board is attached to a connector that comprises a body and a cap, wherein the cap and body are capable of being connected by at least two connecting bolts to form a clamp that, without being attached to the head of a golf club, is capable of engaging the hosel of the golf club with sufficient friction to prevent free rotation of the analyzer about the hosel of the golf club; and

the body comprises a housing capable of containing the battery such that when the battery is placed inside the housing, and the golf club is swung, the battery is capable of being electrically coupled to the at least two LEDs, thereby providing light trails that allow an observer to visualize multiple components of the swing.

2. A golf swing analyzer comprising:

an extension that bears at least two lights and a circuit capable of connecting the lights to a power source;

the extension is attached to a connector that comprises a body and a cap, wherein the body and the cap form a hinge when,

a pin is inserted into a pin cavity in the body in a manner that allows the pin to rotate along its longitudinal axis, the pin having at least one pin socket capable of receiving a first connecting bolt, and the first connecting bolt is inserted through a cap hole in the cap, then through a hinge slot in communication with the pin cavity in the body, and then threaded into the pin socket;

wherein, at a portion of the body substantially opposing the pin cavity, the body has at least one bolt socket capable of receiving a second connecting bolt that, when received in the bolt socket, is capable of transversely engaging a cap slot at a portion of the cap substantially opposing the cap hole when the cap is hinged to the body and is rotated about the pin to engage the second connecting bolt; and

when hinged, the cap and the body are capable of opening to receive a hosel or a shaft of a golf club, then closing to form a clamp capable of being tightened to attach the analyzer to the golf club.

3. A golf swing analyzer comprising:

an extension that bears at least two lights and a circuit capable of connecting the lights to a power source;

the extension is attached to a connector comprising a body having a body indent and a cap having a cap indent, wherein the body and the cap are capable of engaging each other to form a clamp in which the body indent and the cap indent form a cavity capable of receiving a shaft or a hosel of a golf club;

wherein, when engaged around the shaft or hosel of the golf club, the connector is capable of clamping on to the hosel or the shaft of the golf club without being attached to the head of the golf club, so that the analyzer cannot freely rotate, but is capable of being rotated, about the longitudinal axis of the shaft of the golf club.

4. The golf swing analyzer according to claim 3 wherein the at least two lights are two LEDs of different colors arranged on the extension so that, when the analyzer is attached to a golf club such that the extension is extended over a face of the golf club, and a golfer looks down on the club face, the LEDs is capable of forming a straight line that is perpendicular to the face of the golf club.

5. The golf swing analyzer according to claim 3, wherein the body further comprises a housing capable of containing a battery;

the housing including a top spring conductively connected to a top contact, a bottom spring and a bottom set-screw contact;

wherein when the housing contains a battery, and the analyzer is attached to a golf club swung by a golfer, the circuit is complete, and power is directed to the lights.

6. The golf swing analyzer according to claim 3 wherein the extension is a printed circuit board that is releasably fastened to the body by at an extension bolt.

7. The golf swing analyzer according to claim 6 wherein the printed circuit board bears a Y-accelerometer, a X-accelerometer, a microprocessor and an LED array capable of producing a virtual display of text, numbers and symbols.

8. The golf swing analyzer according to claim 7 further comprising a mode selector and a club selector.

9. The golf swing analyzer according to claim 3 wherein the body and the cap form a clamp when at least two connecting bolts are inserted through corresponding cap holes in the cap and the at least two connecting bolts are threaded into corresponding bolt sockets in the body.

10. The golf swing analyzer according to claim 3 wherein the body further comprises a longitudinal pin cavity along a first side of the body that engage the cap, a hinge slot in communication with the pin cavity so that when a pin having a hinge socket is inserted into the pin cavity, the hinge socket is exposed by the hinge slot;

the cap further comprises a transverse cap hole in a first side of the cap that engages the first side of the body; and

wherein the body and the cap form a hinged clamp when a connecting bolt is inserted through the cap hole and threaded into the hinge slot exposed hinge socket of the pin that has been inserted into the pin cavity.

11. The golf swing analyzer according to claim 10 wherein the a second hinge slot is in communication with the pin cavity so that when the pin further comprising a second hinge sockets

is inserted into the pin cavity, each hinge socket is exposed by a corresponding hinge slot;

the cap further comprises a second transverse cap hole in the first side of the cap that engages the first side of the body; and

wherein the body and the cap form a hinged clamp when two connecting bolts are inserted through the cap holes in the cap and threaded into the hinge slot exposed hinge sockets in the pin that has been inserted into the pin cavity.

12. The golf swing analyzer according to claim 4 wherein the body further comprises a longitudinal pin cavity along a first side of the body that engage the cap, at least two hinge slots in communication with the pin cavity so that when a pin having at least two hinge sockets is inserted into the pin cavity, the hinge sockets are exposed by the hinge slots;

the cap further comprises at least two transverse cap holes in a first side of the cap that engages the first side of the body; and

wherein the body and the cap form a hinged clamp when two connecting bolts are inserted through the cap holes and threaded into the hinge slot exposed hinge sockets of the pin that has been inserted into the pin cavity.

13. The golf swing analyzer according to claim 5 wherein the body further comprises a longitudinal pin cavity along a first side of the body that engage the cap, at least two hinge slots in communication with the pin cavity so that when a pin having at least two hinge socket is inserted into the pin cavity, the hinge sockets are exposed by the hinge slots;

the cap further comprises at least two transverse cap holes in a first side of the cap that engages the first side of the body; and

wherein the body and the cap form a hinged clamp when two connecting bolts are inserted through the cap holes and threaded into the hinge slot exposed hinge sockets of the pin that has been inserted into the pin cavity.

14. The golf swing analyzer according to claim 6 wherein the body further comprises a longitudinal pin cavity along a first side of the body that engage the cap, at least two hinge slots in communication with the pin cavity so that when a pin having at least two hinge socket is inserted into the pin cavity, the hinge sockets are exposed by the hinge slots;

the cap further comprises at least two transverse cap holes in a first side of the cap that engages the first side of the body; and

wherein the body and the cap form a hinged clamp when two connecting bolts are inserted through the cap holes and threaded into the hinge slot exposed hinge sockets of the pin that has been inserted into the pin cavity.

15. The golf swing analyzer according to claim 2 wherein the at least two lights are two LEDs of different colors arranged on the extension so that, when the analyzer is attached to a golf club such that the extension is extended over a face of the golf club, and a golfer looks down on the club face, the LEDs is capable of forming a straight line that is perpendicular to the face of the golf club.

16. The golf swing analyzer according to claim 2, wherein the body further comprises a housing capable of containing a battery;

the housing including a top spring conductively connected to a top contact, a bottom spring and a bottom set-screw contact such that, when the analyzer is attached to a golf club swung by a golfer, and the housing contains a battery, the circuit is complete, and power is directed to the lights.

17. The golf swing analyzer according to claim 2 wherein the extension is a printed circuit board that is releasably fastened to the body by an extension bolt.

18. The golf swing analyzer according to claim 17 wherein the printed circuit board bears a Y-accelerometer, a X-accelerometer, a microprocessor and an LED array capable of producing a virtual display of text, numbers and symbols.

19. The golf swing analyzer according to claim 2 wherein the at least two lights are two LEDs of different colors arranged on the extension so that, when the analyzer is attached to the golf club such that the extension is extended over a face of a golf club, and a golfer looks down on the club face, the LEDs is capable of forming a straight line that is perpendicular to the surface of the face of the golf club;

wherein the extension is made from a printed circuit board that is releasably fastened to the body by at least two extension bolts;

the body further comprises a housing capable of containing a battery, the housing including a top spring conductively connected to a top contact, a bottom spring and a bottom set-screw contact such that, when the analyzer is attached to a golf club swung by a golfer, and the housing contains a battery, the circuit is complete, and power is directed to the lights.

20. A golf swing analyzer kit comprising the golf swing analyzer according to claim 3 and a target line comprising a front strip connected to a back strip by a first Velcro portion on the front strip and a second Velcro portion on the back strip, wherein the front strip further comprises a flexible ground attaching means, and the back strip is folded into a target pocket adjacent to second Velcro portion and further comprises a ground attaching means.